MONTGOMERY COUNTY EMPLOYEES' RETIREMENT SYSTEM
STATEMENT OF DERIVATIVES INVESTMENT PROGRAM

The strategic objective of the use of derivatives is to facilitate risk management and to manage the cost of investing in publicly-traded stocks and bonds. The growth of derivative instruments worldwide has facilitated the investment process. A "derivative instrument" is defined in this document as an instrument which derives its value, usefulness and marketability from an underlying instrument which represents direct ownership of an asset or a direct obligation of an issuer, i.e. a "spot" or cash market instrument.

The investment philosophy adopted by the Board of Investment Trustees which governs the use of derivative securities is summarized as follows:

Derivatives should be used only in circumstances where they offer the most economic means of improving risk/reward profile of the portfolio (the cost of the derivative versus the cost of constructing an equivalent position in traditional securities).

Derivatives should not increase portfolio risk above the level that could be achieved in the portfolio using only traditional investment securities. In particular, the use of derivatives should not violate either the letter or the spirit of investment guidelines that limit exposure to market, sector, and security risks.

Derivatives should not be used to increase the dollar value of the position (financial leverage); to the extent leverage is implicit in the nature of the derivative security, the portfolio must be managed within duration guidelines or the effect must be directly offset by underlying positions.

Derivatives should not be used to acquire outright exposure to changes in the value of assets or indices that by themselves would not be purchased for the portfolio.

In aggregate the notional value of all derivatives positions, excluding mortgage derivative securities and contracts associated with currency hedging, shall not exceed 10% of the market value of the entire fund.

These are the four basic strategies that can be achieved through the use of derivatives. Of these four strategies, only substitution and risk control are permitted; arbitrage and speculation are prohibited.

Permitted

Substitution: When the characteristics of the derivative sufficiently parallel those of the cash market instrument, the derivative may be substituted on a short-term basis for the cash market instrument, or on a longer-term basis to avoid withholding taxes. The strategy is particularly useful when investing cash flow or liquidating investments, since the derivative can be used to manage more precisely market entry and exit points.

Risk Control: When characteristics of the derivative instrument sufficiently parallel those of the cash market instrument, an opposite position in the derivative can be taken from the cash market instrument to alter the exposure to or the risk (volatility) of the cash instrument. This strategy is useful to manage risk without having to sell the cash instrument. Sometimes referred to a "hedging," the use of the derivative in this context means that there is a high inverse correlation in price movement between the cash market instrument and derivative instrument.

Not Permitted

Arbitrage: When a transaction is done for profit based on a price difference between a derivative and a similar fungible cash instrument, this transaction is known as arbitrage. An example of this transaction is an index arbitrage where a simultaneous trade to buy an index of stocks and a trade to sell a similar index futures contract occurs, where the sale of the index futures contract may be higher than the purchase. This transaction allows the arbitrageur to gain a profit from the price difference between similar securities.

Speculation: When the derivative is purchased or sold for the purpose of achieving a higher possible gain than traditional investments but the investor recognizes that a higher probability of loss could be realized, this transaction is called speculation. An example of speculation is the purchase or sale of an option with the sole purpose of achieving gain. The investors assumes the risk taken by purchasing or selling the option with the understanding that they could lose all their invested principal due to the finite life of the option.

The derivative instrument market is evolving and new instruments are created constantly, therefore listing permissible and non-permissible securities is always problematic. Rather than list each derivative security, classes of derivatives will be described below, and may only be used by managers with guideline authority to do so. The prohibitions and examples are designed to enhance interpretation and understanding of this philosophy and should not be considered an exhaustive list.

Attached to this Program is a Derivatives Matrix, which articulates the instruments, their uses, risks and remedies used to mitigate these risks. This matrix is designed as a supplement to this Program for descriptive purposes only.

Financial Futures: Stock index futures, bond futures and currency futures contracts which are Commodities and Futures Trading Commission (CFTC) approved are permitted when the manager has permission to invest in the underlying or deliverable cash market instrument. Financial futures may be used to manage the duration of the portfolio, to implement sector changes rapidly, and as a substitute for physical securities when advantageous. The use of futures provides substantial benefits in terms of reduced transaction costs and flexibility to invest in physical securities with different maturities. Financial futures should be used in a manner consistent with the overall duration target and investment objectives.

Options: Stock index options, options on stocks and bonds and currency options, and exchange traded options on futures, are permitted for use by managers who have permission to invest in the underlying or deliverable cash market instrument or whose mandate is to overlay a designated portfolio of deliverable cash market instruments.

Futures and options contracts shall be limited to liquid instruments actively traded on major exchanges and Over-the-Counter.

Currency Forward Contracts: Currency forward contracts are permitted for use by managers who have permission to invest in the underlying or deliverable cash market instrument or whose mandate is to overlay a designated portfolio of deliverable cash market instruments. Foreign exchange transactions may occur between foreign currencies (cross currencies) when made in anticipation of future sales or purchases of securities or when consistent with the investment manager's currency management guidelines.

Forward positions should not have a notional value, as measured in local currency, greater than the currency asset being hedged, allowing for short-term fluctuations due to operational aspects of trading and pricing.

Further, managers are required to diversify roll dates when significant levels of hedging are in place, e.g. over 50% of the account value, or when roll dates extend beyond six months. Individual counter party exposure is limited to 5% of the Montgomery Employee Retirement System Fund. Derivative positions will be marked-to-market daily.

Swaps: Swaps which may provide for the receipt of the rate of return of the permitted cash market instrument are allowed. For currency forward contracts and swaps, counter party credit risk will be monitored. Counter party credit worthiness shall be equivalent to investment grade AA (S&P) and/or Aa (Moody's). For non-exchange traded derivatives, individual counter party exposure is limited to 5% of Montgomery County Employees Retirement System Fund. Derivative positions will be marked-to-market daily.

Structured Notes and Mortgage Derivatives: Structured notes and mortgage derivatives are permitted and are expressly addressed in manager's investment guidelines. However, certain structured notes are not appropriate if they have the following characteristics:

- significant difficulty or imprecision in measuring risk of the security or its underlying collateral.
- highly unpredictable cash flows
- poor liquidity
- implied leverage
- subject to dramatic duration shifts with changes in interest rates (extension risk), such as floating rate securities whose interest rate reset provisions are based on a formula that magnifies interest rate changes, e.g., inverse floaters or leveraged floaters.

Individual counter party exposure is limited to 5% of the Montgomery County Employees' Retirement Fund. Derivative positions will be marked-to-market daily.

Floating rate reset mechanisms must be tied to domestic fixed income indices. Cost of funds indices and foreign exchange indices are examples of inappropriate floating rate structures.

Specific structures and constraints will be addressed in managers' guidelines.

Warrants: Purchasing warrants separately is prohibited; however, warrants are permitted when attached to securities authorized for investment.

Reporting Requirements

Prior to initiating a derivatives position, the manager must provide a written derivatives Program and procedures.

Managers must provide a report monthly that outlines by derivative:

- counter-parties used, quality of the counter-party, and the market value, cost value, gain/loss, notional exposure, and amount of exposure;
- a description of the strategy and expected outcome of the derivative use;
- the quantified impact to the portfolio.

A quarterly report of derivatives positions will be provided to the Board.

Responsibilities and Delegations

The Board is responsible for approving and amending the Program and has delegated responsibility for administering the Program to the Board staff.

The Board staff shall review the written policies and procedures of the external money managers with respect to derivative use and shall monitor reports from the manager and master custodial bank at least quarterly to ensure derivative use is in compliance with this Program.

With respect to derivatives in a mutual or commingled fund, the Board will obtain sufficient information to assess the following: the fund's strategy with respect to derivatives in its portfolio; the extent of the investment by fund in derivatives; and other such information as would be deemed prudent. After such a due diligence has occurred, the Board may approve the use of the mutual or commingled fund's derivative policies.

The Board staff and consultant shall monitor the investment performance results of the external managers to ensure that any derivative use is not having a long-term deleterious effect on the portfolio relative to Program benchmark.

The managers are granted investment discretion under their investment management agreements with the Board subject to their investment management guidelines. The Board delegates to the managers the execution of derivatives transactions under this Program. The managers who are permitted to use derivatives must comply with this Program, or derivatives use is prohibited. Nothing in this Program supersedes the managers' legal obligations to the Board contained in their investment management agreement.

AMENDED: December 2000 (RES 00-12-02)
ADOPTED: March 1999 (RES 99-03-04)

Attached: Appendix to MCERS Derivative Program

Derivatives Matrix
Appendix to MCERS Derivatives Policy

Instrument	What Are They	Use	Risks	Remedies
Futures	--A contractual agreement between two parties to buy or sell an asset at a certain time in the future for a certain price. --Normally traded on an exchange --Underlying assets can be financial assets (currencies, equity or bond indices) or commodities (ex., pork bellies, gold). --Mark to market daily.	**Substitution** --Gain exposure to market (ex. equitize cash or market neutral strategy). --Adjust existing exposure (ex. alter duration of portfolios, rebalance portfolio). **Risk Control** --Eliminate exposure (ex. short equity futures to reduce equity exposure). **Arbitrage** --Simultaneous purchase or sale of derivatives and opposite transaction in cash market to lock in gain (spread). **Not allowed in MCERS policy.**	1. Liquidity risk: liquidity may be greatly diminished or essentially disappear for short period (ex. Oct. 19, 1987). 2. Basis risk: cash and futures market may not trade in synch, resulting in different "price" for one market vs. other. (ex. S&P 500 cash market price may not equal future price - adjusted for implied interest rate)resulting in small gain or loss to derivatives holders. Arbitrage minimizes basis risk. Basis risk should disappear at expiration date, although could be a factor if contracts are rolled (ex., near contract sold, distant contract purchased - also known as roll risk). Basis risk can create different returns if the futures are (under) over valued at the time of purchase or when the position is rolled at expiration.	1) Diversification of roll dates 2) Avoid illiquid contracts 3) Avoid reliance on dynamic strategies 4) Prohibit arbitrage (eliminating problem of hedge breaking down). 5) Daily mark to market

Instrument	What Are They	Use	Risks	Remedies
Forwards	Like futures, except, 1. Not traded on exchanges, 2. Transaction between two or more private parties. 3. Mark to market at settlement.	**<u>Risk Control</u>** --Generally used to hedge foreign currency exposure	1. Counter party risk: risk that the counter party defaults on its obligation to pay the difference in cash flows. The risk is to the cash flow owed since contract initiation (not the value being hedged, but the change in value). 2. Roll risk: --the risk that when a forward contract expires, a new forward to replace the expired one cannot be put into place on the same cost or hedge basis due to changes in market liquidity, interest rates, etc. The result is a potential slippage, or loss in the hedge position due to the contract expiration and roll. --cash flow risk associated with rolls. Forwards mark to market at settlement and can require significant positive /negative cashflows. This can create anomalies in return calculations as a large account receivable has a cash drag effect, diluting performance, and a large account payable has a return leveraging impact. These problems can be mitigated by staggering roll dates of the position.	1) Limit counterparty credit worthiness to AA (S&P) and/or Aa(Moody's) 2) Individual counter party exposure is limited to 5% of the MCERS Fund 3) Diversification of contact dates(roll dates) 4) Use more frequent mark to markets in non-exchange traded derivatives if additional risk control desired

Instrument	What Are They	Use	Risks	Remedies
Swaps	A <u>private</u> agreement between two parties to exchange cash flows at a certain time in the future according to some prearranged formula.	**<u>Substitution</u>** --To obtain exposure to markets with limited liquidity. --To obtain a customized market exposure (ex. long technology and short S&P). --To obtain exposure to markets with ownership restrictions. --To exchange interest rates or currency in which a loan is denominated.	1. Counter party risk: risk that the counter party defaults on its obligation to pay the difference in cash flows. Because swaps are marked to market frequently, the risk is to the remaining cash flow owed since the last settlement. 2. Market risk: (capital markets, interest rates or currencies) move in such a way that the value of the contract becomes negative.	5) Limit counterparty credit worthiness to AA(S&P) and/or Aa(Moody's) 6) Individual counter party exposure is limited to 5% of the MCERS Fund 7) Diversification of contract dates (roll dates) 8) Use more frequent mark to markets in non-exchange traded derivatives if additional risk control desired

Instrument	What Are They	Use	Risks	Remedies
Structured Notes	Securities which derive their value from some package of underlying securities or relationships between securities or indices. (ex. CMO's and other mortgage securities, asset backed securities).	**Substitution** Generally purchased in lieu of other securities because of superior valuation or payoff pattern. For instance, a CMO may be purchased in place of a straight GNMA or corporate bond for reasons stated.	1. Credit risk: default in underlying security. 2. Possible counter party risk 3. Structure risk: --Package of securities don't perform as expected. --Inappropriate exposure: (ex. value of bond could be function of foreign currency which may not be appropriate for domestic bond portfolio. 4. Measurement risk: valuation methods for measuring the security may not correctly capture price behavior. 5. Interest rate risk: some securities have greater sensitivity to interest rate changes than traditional instruments. 6. Implied leverage: the value of some securities is a function of a leveraged relationship between underlying securities or indices.	1) Credit requirements consistent with investment manager guidelines. 2) Limit counterparty credit worthiness to AA(S&P) and/or Aa (Moody's) 3) Individual counter party exposure is limited to 5% of the MCERS Fund 4) Prohibit securities where manager has significant difficulty measuring the risk of the security. 5) Prohibit securities with excessive extension risk 6) Prohibit securities with implied leverage

Instrument	What Are They	Use	Risks	Remedies
Options	--An option gives the holder the right to do something. The holder does not have to exercise that right. --A call option gives the holder the right to buy the underlying asset by a certain date for a certain price. --A put option gives the holder the right to sell the underlying asset by a certain date for a certain price. --American options can be exercised anytime up to the expiration date, while European options can only be exercised on the expiration date itself. Options can be exchanged traded, or traded OTC.	**Risk Control** --Hedge various types of risk, for example, (1) a manager may lock in a stock's return by holding the stock and buying a put stock option. (2) a portfolio manager may protect a stock portfolio from a severe drop in value by holding the portfolio and buying put index options (a portfolio insurance strategy). **Arbitrage** Arbitrage seeks to take advantage of mis-pricing in different markets for the same instrument or different instruments for the same underlying security. **Substitution** An option to purchase a security may be more attractive than a direct purchase of the security itself.	1. Market risk: Interest rates, currencies or other market relationships move in such a way that the value of the option declines or becomes worthless (loss of option premium paid, or the acceptance of a security at below current market value). 2. Credit (counter party) risk: that the counter party may not be able settle the transaction (default). Subject only to OTC options. 3. Basis risk: the option could be rolled when there is a change in the relationship between the underlying security and the option.(roll risk). 4. Liquidity risk: liquidity may be greatly diminished or essentially disappear for short period (ex. Oct. 19, 1987). 5. Time risk: options are wasting assets, whereby the value of the option declines as it approaches expiration.	1) Diversification of contract expiration dates 2) Avoid illiquid contracts 3) Avoid reliance on dynamic strategies 4) Prohibit arbitrage (eliminating problem of hedge breaking down). 5) Prohibit naked positions